

## Assignment#1 – How To Develop the OData Services

### 1. odata-sql - outline part 1

See also the sample **odata-sql-mini**, which uses **MyOrders** and **MyCustomers**, instead of **Orders**, **Customers** and **Employees**

- Start **Visual Studio 2015**
- New Project
- **ASP.NET Web Application (.NET Framework)** - NOT Core!
- Location: choose a new folder (preferably empty or with just our **.nuget** folder)
- Default name: **WebApplication1** OK (our other scripts expect this)
- Create directory for solution: **NO**
- Add ApplicationInsights: **NO**
- **ASP.NET Template: Empty** for odata-\* (note : MVC for mvc-sql)
- Project Add new item... **Web... WCF Data Service** Default name **WcfDataService1** OK (expected...)
- Project Add new item... **Data... ADO.NET Entity Data Model... EF Designer from database**
- Choose Data Connection **Microsoft SQL Server Database File (SqlClient)** - sugared version for **(LocalDb)\MSSQLLocalDB** i.e. **SQL Express 2016 LocalDB**
- Browse for database: **C:\usertmp\Northwind.mdf**
- Test connection
- Note the Web.config and database model name: **NorthwindEntities**
- **DO NOT accept the proposed copy of the C:\usertmp\Northwind database file to the project App\_Data!**
- Remain under **EntityFramework 5**
- Choose database tables: **Customers**, **Employees** and **Orders** (or **MyCustomers** and **MyOrders** for the mini sample)
- **OK** to a few spurious warnings
- Check the auto-generated model sources: **MyCustomer.cs**, **MyOrder.cs**. **Model1.Content.cs** (the database model)

- Modify **WcfDataService1.svc.cs**:
  - Important lines
    - `DataService<NorthwindEntities>`
    - `config.SetEntitySetAccessRule("*", EntitySetRights.AllRead);`
  - Useful (in case of errors)
    - `[ServiceBehavior(IncludeExceptionDetailInFaults = true)]`
    - `config.UseVerboseErrors = true;`
- Build solution
- VS Debug test (note: VS random selected port)
- External tests with **RESTclient** (with the VS generated port)
- Close Visual Studio

## 2. odata-sql - outline part 2

- **NO VS needed**
- Add a copy of our **.nuget** folder, if not already (used by some of our other scripts)
- Add copies of all our **batch** files and try these
  - `_packages_clean.bat`
  - `_msbuild-clean.bat`
  - `_packages_restore.bat`
  - `_msbuild-build.bat`
  - `_Service_IISExpress_x64_8181.bat`
  - `_localhost-8181-WcfDataService1.svc`
- External tests with **RESTclient** (with our IISExpress port, i.e. 8181)

### 3. **odata-xml** - outline

See also the sample **odata-xml-mini**, which uses **XMyOrders** and **XMyCustomers**, instead of **XOrders**, **XCustomers** and **XEmployees**

- Similar to **odata-sql**, but **NO Data...** NO ADO.NET Entity Data Model... NO EF Designer from database...
- Instead, manually mimic an in-memory database called **MyDataSource** with entities **Customers**, **Employees** and **Orders** (or **MyCustomers** and **MyOrders** for the mini sample)
- Follow the sample code **WcfDataService1.svc.cs** of **odata-xml-mini**... essentially
- First, **populate** your **IQueryable** entities from the given **XML** files
- Then, **recreate** their associations
- Use **static** fields for these

### 4. Running **demo on the Azure cloud**

Use **RESTclient**

- <http://webapplication120160809020005.azurewebsites.net/WcfDataService1.svc/>
- [http://webapplication120160809020005.azurewebsites.net/WcfDataService1.svc/Orders\(\)?\\$top=3&\\$format=json](http://webapplication120160809020005.azurewebsites.net/WcfDataService1.svc/Orders()?$top=3&$format=json)
- [http://webapplication120160809020005.azurewebsites.net/WcfDataService1.svc/Orders\(\)?\\$top=3&\\$expand=Customer,Employee&\\$format=json](http://webapplication120160809020005.azurewebsites.net/WcfDataService1.svc/Orders()?$top=3&$expand=Customer,Employee&$format=json)
- [http://webapplication120160809020005.azurewebsites.net/WcfDataService1.svc/Orders\(\)?\\$skip=3&\\$top=3&\\$expand=Customer,Employee&\\$format=json](http://webapplication120160809020005.azurewebsites.net/WcfDataService1.svc/Orders()?$skip=3&$top=3&$expand=Customer,Employee&$format=json)
- [http://webapplication120160809020005.azurewebsites.net/WcfDataService1.svc/Orders\(\)?\\$orderby=Freight desc,OrderID desc&\\$skip=3&\\$top=3&\\$expand=Customer,Employee&\\$format=json](http://webapplication120160809020005.azurewebsites.net/WcfDataService1.svc/Orders()?$orderby=Freight desc,OrderID desc&$skip=3&$top=3&$expand=Customer,Employee&$format=json)